



INSTRUCT-O-GRAM

THE HANDS-ON TRAINING GUIDE FOR THE FIRE INSTRUCTOR

The "Safety Engine" RIT Search Operations. Part I

TRAINING OBJECTIVE:

Following this segment, the student will be able to describe the appropriate actions to be taken when lost/trapped within a structure and the proper search techniques to be utilized during a Safety Engine/R.I.T. deployment.

METHODS OF INSTRUCTION:

- ⊙ Lecture
- ⊙ Demonstration
- ⊙ Practical Exercises

INSTRUCTIONAL AIDS:

- ⊙ Course Outline
- ⊙ Video Projection Unit
- ⊙ End of the Line Video (Phoenix, AZ)
- ⊙ Department R.I.T. Standard Operating Guideline/Procedure
- ⊙ Referenced NIOSH Reports
- ⊙ Smoke Generator (Synthetic/Non-toxic)
- ⊙ Acquired structure or burn house training facility
- ⊙ TIC Camera
- ⊙ Guideline / Taglines
- ⊙ 150'- 200' Hose line

PERFORMANCE OBJECTIVES:

Following this segment, the student will:

- ⊙ Identify the ten (10) self-survival steps to be followed when lost/disoriented or trapped in a structure.
- ⊙ Identify the eight (8) most common cues utilized to locate a lost/disoriented/trapped firefighter.
- ⊙ Identify the five (5) most common Safety Engine/RIT search techniques used to locate a downed or missing firefighter.
- ⊙ Describe how the search for a downed/trapped firefighter differs from a search for a civilian.

REFERENCES:

- ⊙ Casey, Heather (2000, Sept.) Firehouse.com/news/2000/9/28, "Test Asks: Can You Survive?"
- ⊙ Coleman, John F. (1997) *Incident Management for the Street Smart Fire Officer*, PennWell Publishing, Saddlebrook, NJ
- ⊙ Dorgan, Skip (2000, Jan.) "Search Rope Basics" Fire Engineering, 98-101, 104, 108
- ⊙ Hopkins, Ronald L. (1990) "Search and Rescue" Course Manual, Washington County Fire School

REFERENCES, continued:

- ⊙ National Institute for Occupational Safety and Health (NIOSH)(1998, Apr.) *Death in the Line Of Duty, Report 98-F-04*
- ⊙ National Institute for Occupational Safety and Health (NIOSH)(1998, July) *Death in the Line Of Duty, Report 98-F-07*
- ⊙ National Institute for Occupational Safety and Health (NIOSH)(2000, Sept.) *Death in the Line Of Duty, Report 99-F-47*
- ⊙ Woodworth, Steven P. (1997, Aug.) *"Thermal Imaging for the Fire Service Part 6: The Search"*

ESTIMATED TEACHING TIME:

16 – 24 Hours - Annual review recommended

INTRODUCTION:

Over the past several years, there has been a number of incidents involving RIT Team deployments that have been unsuccessful, this by no means is meant to direct blame or find fault, yet the reality is we must develop a safe and effective method of locating our downed comrades. In 1999, the Worcester Fire Department lost six (6) firefighters, four (4) of which were rapid intervention members. In this same year, Kansas City (MO) lost a Battalion Chief in a warehouse fire in which six (6) rapid intervention teams were deployed to search for their fallen comrade. In 1998, a Captain with Los Angeles City died after becoming lost in a commercial structure following a collapse. The list can go on and on. As we consider the above aforementioned incidents and many more of the recent past, we must consider how to quickly and effectively locate these downed members and how to initiate the necessary rescue plan for their safe and immediate removal.

It certainly comes as no surprise that Safety Engine/RIT Search procedures are different than that of the civilian searches performed on a daily basis across the country. Safety Engine/RIT searches should be based on three critical factors: speed, rescuer orientation and tractability. Without question the emphasis on speed will enhance the likelihood of victim survival, but if we the rescuing crew become disoriented or fail to provide a tractable means of egress/access we become an additional part of the problem.

Over the past few years we have discussed various techniques and alternatives in fire service strategy & tactics, training, and attitudes that have been specifically designed to lesson and/or prevent the probability of a fire ground Mayday. Unfortunately, despite our continual efforts, history tells us that the

potential for the fire ground "Mayday" will always remain. This program will provide five (5) effective search techniques that with proper training and discipline can be utilized by the Safety Engine/RIT Crew during the search for a lost/trapped firefighter.

PRESENTATION:

The critical link to any "Mayday"/Fire ground survival program is proactive self-survival training. As trainers, firefighters, fire officers the like, we need to know what to do and also know what our firefighters will do in case of an emergency. What training have we provided our members? What actions do we expect in a "Mayday" situation? Departmental standardization goes along way to increasing firefighter survival. If the trained upon and departmentally accepted policy is to retreat to visible light when disoriented, the solution to disorientation is to establish exit way lighting. This same concept holds true for S.C.B.A. emergencies, collapse emergencies, rapid-fire development, etc. The more we know about our firefighters survival training and the more standardized it is, the greater the likelihood of rescuing the downed/disoriented member.

A recent promotional exercise conducted by Chesterfield County Fire and EMS (Replicated in Activity 1 of this program) proves that standardization is key. In this exercise, promotional candidates were given a scenario of being lost or disoriented in a smoke filled Shopping Mall with 700psi of air remaining, the sole objective; self-preservation. Surprisingly, the number of potential solutions equaled the number of candidates.

In looking at such an exercise, how would your members react in a similar situation? Do you know? And if not, what training is necessary to make this action "predictable?" As we know from previous sessions, if it's predictable, it's preventable. With this thought in mind, if we know what the reaction might be given a specific situation, (due to proper training and continual discipline) we can certainly react appropriately and most likely with a higher degree of success.

STANDARDIZED ACTION FOR A LOST / TRAPPED FIREFIGHTER

1. Stay Calm, preserve your air supply

A conscious effort must be made by the lost or trapped firefighter to control his/her breathing (Skip breathing techniques or other means of air conservation should be immediately initiated by the trapped or disoriented member). Unnecessary talking or physical activity must be ceased, unless absolutely needed. Firefighters

must control and pace their physical exertion activities in order to extend their air supply. Trapped or disoriented members must understand that this is their most critical limitation absent of direct trauma or flame impingement.

2. Stay with your partner or crew

As a general rule, it is much easier to find a group rather than individuals. Members that separate from each other make it difficult for rescuers to find. Crewmembers that stay intact as a crew enhance their chances of being rescued and allows for an easier, more efficient rescue operation.

3. Initiate a “Mayday” / Activate emergency distress button

The lost or trapped firefighter should immediately initiate a “Mayday” request to notify the incident commander of his/her situation. If applicable, the firefighter should activate the emergency distress button on his/her portable radio, thus notifying dispatch of a firefighter in distress. This ensures that someone is immediately aware of a problem on the fire ground if the IC does not immediately hear the initial radio traffic from the trapped or disoriented member.

When initiating a “Mayday” attempt to provide the following information (**U.C.A.N.**):

U – Unit (Identify who you are what unit your with)

C – Conditions (Describe your situation – trapped, lost, etc.)

A – Actions (Describe your actions, searching, tapping, etc.)

N – Needs (Identify your needs – Ladder, air, etc.)

4. Activate P.A.S.S.

As soon as a firefighter recognizes he/she is lost or trapped, the PASS device must be manually activated to sound the audible tone. The device should remain “ON” until rescued. The lost or trapped firefighter should attempt to silence the PASS when communicating on the radio. Once radio transmissions are completed, the PASS device should be reactivated.

5. Monitor radio / Update command

Firefighters lost or trapped should attempt to monitor the radio for communications from command while updating command of any changing conditions (or additional information (i.e. “Engine 2A to Command, I’ve found a block wall, I can hear members working on the other side.”). The firefighter should attempt to place his/her portable radio near his/her ear to ensure additional communications are not missed.

6. Use flashlight to signal rescuers

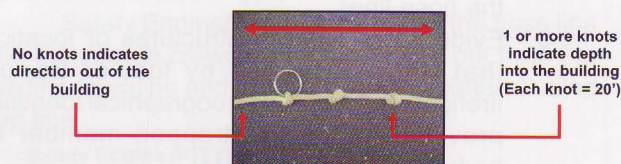
If assuming a position to await rescuers, the firefighter should attempt to position his/her flashlight toward the ceiling and/or continue rotating the beam side to side (acting as a beacon) to signal potential rescuers. This effort will enhance the rescuer’s ability to see the light and locate the downed firefighter.

7. Use tools or debris to alert rescuers

If able, the firefighter should also attempt to create tapping noises to assist rescuers in locating him/her (i.e., hitting a tools or debris against a metal roll-up door, floor or hard surface within the immediate area).

8. Attempt to locate an exit – Seek area of refuge

A lost firefighter should always attempt to get out of the building by whatever means possible (always keeping in mind his/her air supply). Where doors, windows, or other means of egress are not available, firefighters should next attempt to reach an exterior wall. Once at the wall, he/she will be able to search for doorways, windows, and hallways, which generally lead to the outside. Getting to one of these areas (exterior wall by windows or doors) increases the chances of being rescued early. Lost or trapped members should remember to move towards visible light, listen for audible sounds. If a hose line or lifeline is located, members should stay with a hose line (or lifeline) and follow it out whenever possible. All firefighters must remember and be continually trained in the self-survival technique of coupling identification (female side of the couplings (when felt first) point toward the pump - EXIT, the male side of the couplings (when felt first) point toward the nozzle - FIRE). The hose line should be treated as a safety line to the outside. Where a lifeline and/or ropes are in use, follow the lifeline/rope to the exterior. As an additional means of orientation when using/deploying lifelines a standardized knot system should be initiated to provide an immediate direction to safety.



If the firefighter cannot find a way out, but there is an area of safe refuge (protective room or floor) away from the fire that the firefighter can retreat to, he/she should take advantage of this location. Lost or trapped firefighters should consider breaching interior walls, closing doors to isolate themselves from potentially being overrun by fire (Keep in mind, you must communicate your movements to command).

9. Go down steps unless in a basement or sub-floor

Lost / disoriented members who find or locate steps should attempt to go down the steps (unless met by fire or intense heat or unless they are working in a basement or sub-floor). By going down steps, a firefighter may avoid the accumulation of smoke on upper floors thereby increasing his/her survivability and/or orientation.

10. Assume a defensive posture

If a firefighter cannot get out (absolute last resort), he/she should assume a position on the floor that maximizes the audible affects of the PASS device. The firefighter should attempt to take this position at an exterior wall, a doorway, or hallway that maximizes quick discovery by rescue crews. Proper positioning is dependent on the surrounding conditions, i.e. heavy heat environment, place your face in a corner with your hands shielding your face from exposure with your back facing outward (unless his/her PASS alarm is located on the left/right side of the SCBA – then assume a left/right lateral position) thereby enhancing the directional projection of the PASS alarm.

WHEN SEARCHING FOR A LOST OR TRAPPED FIREFIGHTERS - CONSIDER

1. Knowledge of their last known location (Using radio reports, last assignment, progress reporting, etc.).
2. Tracing hose lines into the area the firefighter(s) were known to be (If the lost/trapped member was assigned as an attack crew, consider following the hose line and initiating a search in the immediate area of the hose line).
3. Evidence of building structures or locations that were described by lost or trapped firefighters (Utilize the geographical identifiers provided by the lost/trapped member i.e. bedroom, rollup door, etc.).
4. Listening for the audible sounds of a PASS (Assign exterior members to monitoring points on all sides of the structure).

5. Listening for the sound of an SCBA low pressure alarm (four point monitoring)
6. Listen for shouts of help, tapping sounds, sounds of breathing, etc. (four point monitoring).
7. Listen for sounds of portable radio broadcasts audible in the search area (Consider using the Feedback Assisted Rescue (FAR) technique to enhance the broadcast – place two radios together while transmitting with both simultaneously thereby creating a screeching feedback. If the downed firefighter is equipped with a workable a radio, this will transmit a screeching sound enabling search crewmembers to locate the lost/trapped firefighter).
8. Look for flashlight beams – direct beams at the ceiling or flashing lights within the structure. Consideration should be given to turning off all emergency lighting and/or scene lighting momentarily to help in locating any potential signaling from the lost/trapped member.

SAFETY ENGINE/RIT SEARCH TECHNIQUES

NOTE: Any search for a lost or trapped firefighter should be focused on speed, self-orientation and tractability for additional personnel to rapidly assist.

ORIENTED SEARCH

Chief John "Skip" Coleman (Toledo, Ohio) in his book *Incident Management for the Street Smart Fire Officer* introduced the Oriented Search Method for civilian rescue to national fire service in 1997. Using this same technique and the same basic principles the Safety Engine/RIT Crew can incorporate the Oriented Search Method into its arsenal of search techniques for the lost/trapped firefighter(s) in small to medium size structures.

Oriented Search Technique:

The Safety Engine/RIT Crew (3-4 member crew) enters the occupancy (as close to the last known location of the lost or trapped firefighter), immediately initiating a right or left hand search pattern as a means of orientation. It shall be the responsibility of the Safety Engine/RIT Officer to maintain orientation throughout the search process. Upon identifying a doorway or separate room, the Safety Engine/RIT Officer immediately stands by at the doorway (establishing a point of orientation). Before starting the search, Safety Engine/RIT crewmembers communicate to the Safety Engine/RIT Officer a direction of the search (i.e. right or left hand search). The Safety Engine/RIT crewmembers then proceed into the room to initiate the search.

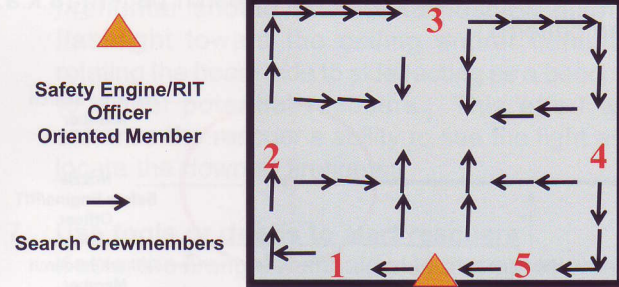
*Depending on the configuration of the structure and the atmosphere for which you're working, the Safety Engine/RIT Officer may choose to remain in the hallway and allow members to conduct simultaneous searches on each side of the Safety Engine/RIT Officer. *This recommendation varies from Chief Coleman's civilian search techniques.* The justification for this variation is quite simple, civilian searches deal with unknowns, firefighter searches deal with many known facts, such as; size of the victim, general location, etc. thereby lessening the need for detailed searches. This should not be interpreted as meaning that particular areas should not be searched; common sense should prevail in that a firefighter with protective clothing is expected to occupy a certain amount of space within a room or void space.

As the Safety Engine/RIT crewmembers begin their search, they also begin to count the number of walls as an additional point of reference. As the Safety Engine/RIT crewmembers continue their search every two-three steps forward he/she should then take two steps towards the center of the room and sweep using a hand tool to properly search the center of the room. Continued progress reports should be provided to the Safety Engine/RIT Officer to enable him/her to properly track progress and update exterior Sector Officers/Command.

If at any point the Safety Engine/RIT crewmembers get in trouble, disoriented or come across a lost/trapped firefighter, they can immediately contact the Safety Engine Officer who can then communicate to the exterior Sector Officer/Command for additional resources or provide directional information as necessary.

The key to all Safety Engine/RIT search operations is speed and maintaining orientation. The advantage to a lost/trapped firefighter search versus a civilian search is we know what we're looking for; we know the standard practices and actions of a firefighter and where they would typically be operating. In a civilian search, we don't know what they were doing, their physical size, etc. So, with these thoughts in mind, we should be able to initiate a much more rapid search while maintaining a point of orientation throughout. In this case our means of orientation is two fold, first we have the Safety Engine Officer remaining at a door or hallway thereby providing a point or directional reference, secondly, we count or number the walls as a means of orientation to enhance our ability to rapidly exit or provide directions for assistance.

SAMPLE ORIENTED SEARCH



The advantages of the Oriented Search Method as identified by Chief Coleman are as follows:

- ⊙ The search team gets lost less frequently, if at all
- ⊙ The firefighters doing the search do a much more thorough job
- ⊙ The firefighters doing the search are much more at ease and confident

Critical factors for safety:

- ⊙ There must be communication between the oriented member (Safety Engine/RIT Officer) and the Safety Engine/RIT crewmembers (searchers) to effectively maintain proper orientation.
- ⊙ The direction of search must be determined (left or right-handed)
- ⊙ The number of walls in the room must be determined.

****This type of Safety Engine/RIT search should be limited to small to medium size structures.***

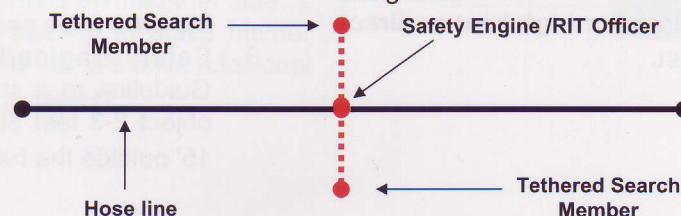
TETHERED SEARCH

The tethered search is by far one of the easiest searches to perform. The tethered search is much like the oriented search in that one member remains oriented at all times while in this case the search crewmembers are directly connected to the oriented member (Safety Engine/RIT Officer) via a tag line or tether.

The tethered search is best utilized when firefighters who were initially on a hose line suddenly become separated and/or lost.

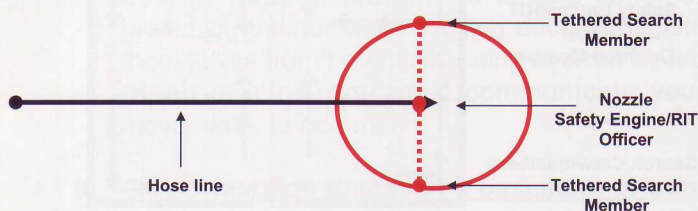
Tethered Technique Type I:

Safety Engine/RIT Officer follows the hose line while the search crewmember(s) extend out from the hose line (creating and extended search pattern) using a tag line.



Tethered Technique Type II:

Safety Engine/RIT Officer stays stationary at the nozzle while the search crewmember(s) extend out from the nozzle in a 180° search pattern (a.k.a. fan pattern).



TAG LINE/TEAM SEARCH

The tag line/team search is more commonly referred to as Large Area Search or Mass Area Search Team (MAST). In the case of a lost/trapped firefighter, the tag line/team search technique enables a minimum amount of rescuers to cover a large area in a short period of time. Unlike most search techniques, the tag line serves as a partner and/or tractable means of egress and access for the rescuing/searching firefighters, thereby allowing the firefighters/search crewmembers to work independently while still maintaining proper orientation and personal safety.

To initiate a tag line/team search the following items must be available:

Search Rope (Guideline)

The Guideline should be a lightweight rope (7/16 – 3/8" diameter at least 200' in length with distance and directional knotting provided every 20') carried in a durable sling style rope bag. The Guideline should be provided with snap hooks (or similar) on each end to enable the Safety Engine/RIT Officer to quickly secure the line to a solid/stationary object outside the hazard zone prior to initiating the search.

Consideration should be given to carrying various marking devices (such as chalk, lumber crayons, door markers, etc.) and wedges in a pouch/bag attached to the guideline rope bag to mark search areas, enhance orientation of members branching off the guideline, and to secure doorways. Additional directional marking can be provided with small portable flashing strobes placed at each change in direction (attach the portable strobe to the tie off point).

WARNING: As with any lifeline search, careful consideration must be given to potential thermal insult to Guidelines and Tag Lines. Hose lines or high temperature lifelines should be deployed where conditions for high heat or direct flame impingement exist.

Personal Tag Lines (Branch Lines) – One per search crewmember

The tag lines should be a lightweight (9mm diameter, preferably 20-30' in length with some type of captive style carabineer securely fastened to one end) rope carried in a small throw bag or similar device attached to the search crewmembers SCBA or tool belt.

CAUTION: Personal search ropes (tag lines/branch lines) should not be permanently attached to your SCBA or any part of the personal protective ensemble incase you become entangled – a quick release hook or breakaway Velcro connection should be considered.

Floodlight or Spotlight

This light should be placed just inside the entrance to serve as a point of reference for rapid egress incase of disorientation.

Portable Radios – One per crewmember

If possible, each crewmember including the Safety Engine/RIT Officer should carry a radio with a designated frequency/TAC channel for Safety Engine/RIT operations ONLY.

Air Supply

Additional S.C.B.A. cylinders should be readily available immediately outside the hazard/hot zone (preferably 45-60 minute capacity).

Safety Engine/RIT Sector Officer

The Safety Engine/RIT Sector Officer serves as the control member on the outside of the hazard/hot zone tracking entry times and air supply readings. The Safety Engine/RIT Sector Officer should provide frequent search time reports to all interior crews (i.e. "RIT Sector to Knot 4, you've been searching for 10 minutes, begin your exit.").

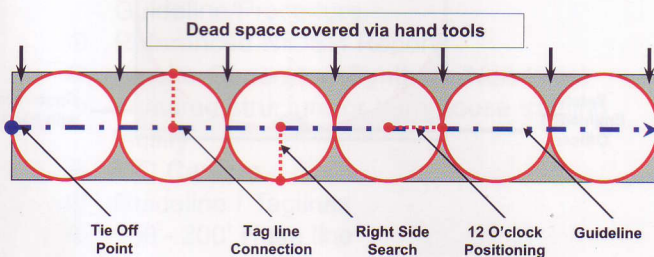
***An excellent overview of the pros and cons of the various search rope configurations can be found in the referenced article by Skip Dorgan – Search Rope Basics (Fire Engineering, Jan 2000).**

TAG LINE / TEAM SEARCH OPERATION

1. Safety Engine/RIT Sector Officer documents air supply readings, entry times and personnel assignments.
2. Safety Engine/RIT Officer or designee places a large spotlight just inside the entrance of the area to be searched.
3. Safety Engine/RIT Officer secures the Guideline to a stationary/permanently fixed object 2-3 feet above ground level and 10'-15' outside the hazard/hot zone.

4. Safety Engine/RIT Officer enters into the structure (proceeds in a direct line towards the last known location of the lost/trapped firefighter or as specified per the rescue action plan). The Safety Engine/RIT Officer shall create a tie off point at each directional change to ensure proper tension is kept on the Guideline (The Safety Engine/RIT Officer should consider carrying additional carabineers to assist with establishing directional tie offs – directional strobes should also be attached at each tie off point when possible.) and to prevent the line from crossing potentially hazardous areas (i.e. unidentified holes in the floor, etc.). Command or the outside Sector Officer should be notified for proper tracking and notification of incoming search crewmembers.
5. Safety Engine/RIT Officer shall assign a search crewmember to connect to the Guideline (every 20') to initiate a circular search. The Safety Engine/RIT Officer may choose to skip certain connection rings if it is deemed unnecessary to search a particular area due to room size, confirmation of an all clear in the area, etc.
6. Search crewmembers shall follow the guideline to the assigned connection point (Identified as Knot 1), hook into the Guideline with their tag line, and initiate a 360° search. Search crewmembers shall start their search at the 12 O'clock position and proceed to the right or left of the Guideline (this provides a point of orientation for the search crewmember – ° of the 360° search is complete once he/she crosses the guideline) providing a progress report once they have completed ° of the assigned search (i.e. "Knot 4 to RIT Sector/Command, Knot 4 reporting right side search complete, proceeding to left side search.").

SAMPLE TAG/TEAM SEARCH



7. Search crewmembers that complete their assigned search should report their findings to the outside Sector Officer/Command, return to the Guideline and await an additional assignment or exit the structure.
8. Upon locating a downed firefighter, the search crewmember shall immediately notify the outside Sector Officer/Command of his/her location (i.e.

"Knot 7 to RIT Sector, I've located the downed firefighter, send in a rescue team with an additional air supply to Knot 7.")

9. Upon confirming the location of the downed firefighter, the Sector Officer/Command shall designate a specific crew of two (2) or more members to follow the Guideline to the specified knot to initiate a rapid extraction of the downed member.

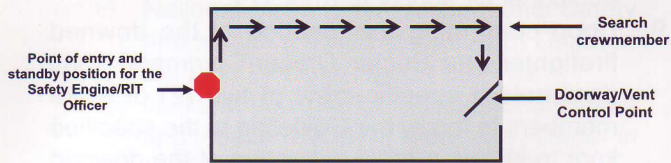
VENT ENTER SEARCH (VES)

As in some civilian searches, the lost, trapped, or missing firefighter may go down during conditions that prevent Safety Engine/RIT Crews from conducting a full fledge building search (i.e., front door, back door initiation of search). In this case, Safety Engine/RIT Crews may initiate the commonly known Vent, Enter, and Search (VES) technique in priority areas (i.e. last known location).

A vent, enter, and search conducted by the Safety Engine/RIT crew should be immediately initiated in area of last known location of the lost/trapped member. This method of search enables firefighters to gain access immediately when internal access ways are compromised. Vent, enter, and search operations rely heavily on the search crewmembers ability to control the ventilation process by isolating the room being searched (i.e. immediately close the interior door to isolate the area from potential fire spread).

Vent Enter Search Technique:

1. Extend a ladder to the window of the room thought to be the location of the downed firefighter.
2. Crews of 2-3 members immediately ascend the ladder; remove the window (VENT).
3. Search crewmembers (1-2) while maintaining contact with the right or left hand wall proceed to locate the door. (As a point of orientation/safety, the Safety Engine/RIT Officer stands by at the tip of the ladder just outside the window, maintaining voice contact with the searching crewmembers. Search crew orientation may be further enhanced by providing a search line or tether from the point of entry). The Safety Engine/RIT Officer by standing by at the ladder tip also enables interior crews to quickly pass the downed firefighter to the Safety Engine/RIT Officer who can then descend the ladder with the rescued member and initiate medical aid as necessary.
4. Once the door is located, it should immediately be closed to prevent fire spread and to enhance direct ventilation and visibility of the occupied room.
5. Begin to search the room.

SAMPLE VENT, ENTER AND SEARCH

***NOTE: THIS TECHNIQUE SHOULD NOT BE INITIATED WHILE POSTIVE PRESSURE FANS ARE IN OPERATION. IT'S ABSOLUTELY ESSENTIAL THAT SEARCH CREWMEMBERS IMMEDIATELY LOCATE THE DOOR AND ISOLATE THE ROOM TO PREVENT POTENTIAL FIRE SPREAD.**

THERMAL IMAGER LED SEARCH

WARNING: Thermal image technology should **ALWAYS** be backed up with basic search techniques. Total reliance on a thermal imager **CAN BE FATAL** if a failure should occur. Always maintain a means of orientation within the structure (i.e. wall, hose line, tag line, etc.) when using a T.I.C. camera.

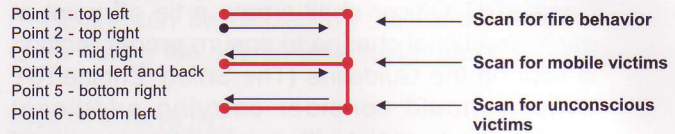
The advent of the thermal imaging camera (TIC) has brought about a new face to search & rescue operations, civilian and firefighter alike. The TIC camera can and should be used to enhance any method/form of search. For example; the Oriented Search Technique, the TIC allows both the Safety Engine/RIT Officer (Oriented member) and the search crewmembers to quickly review the layout of the room prior to entering. After a quick review, the search crewmember(s) enter the room utilizing the walls as his/her means of orientation only searching the specified areas not visible via the TIC (i.e. closets, behind furniture, etc.), thus the speed and efficiency of the oriented search is greatly enhanced.

TWO COMMON FORMS OF TIC SEARCHES**Point-to-Point Search**

Safety Engine/RIT Officer equipped with a TIC enters a room, performs a (6) six-point scan (in the formation of the number 3) of the room, identifies a distinguishable landmark and directs the crew to the landmark (using basic search techniques – following walls, tag lines, hose, etc.). Upon reaching the identified landmark, the Safety Engine/RIT Officer once again performs a (6) six-point scan and identifies the next landmark.

Scanning procedure

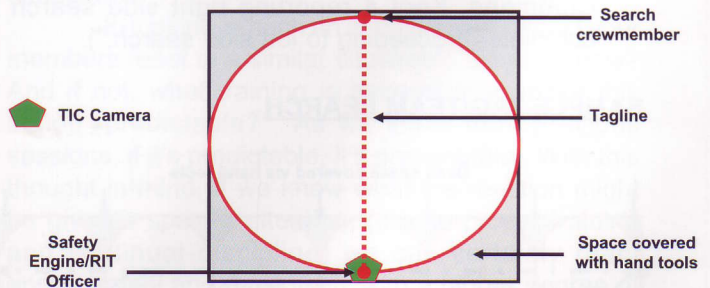
Stop in the doorway (or a point of orientation) – using a six-point approach



***A critical point to remember when using a TIC for search operations is to continually evaluate the overhead for fire behavior. The use of the TIC often times creates tunnel vision for the operator and search crewmembers. The (6) six-point scan method continually updates the Safety Engine/RIT Officer of the potentially deteriorating fire conditions thereby reducing the potential for tunnel vision.**

Oriented TIC Led Search

Safety Engine/RIT Officer remains oriented (at a doorway, hose line or Guideline) and directs search crewmembers throughout the area being searched. The Safety Engine/RIT Officer directs the search, identifies the search pattern, obstacles, etc. while search crewmembers use personal taglines to extend their search operations. The use of a tagline enables search crewmembers to remain oriented throughout the search if a TIC failure should occur while also providing a tractable means for additional rescuers to follow if additional assistance is needed in rescuing the downed member.

EXAMPLE OF AN ORIENTED TIC SEARCH

Part II of The "Safety Engine" RIT Search Operations will be in the May 2004 issue of The Instructor.

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